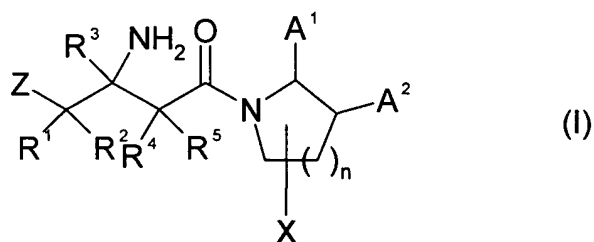


**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Original) A compound of formula (I)



or a pharmaceutically acceptable salt thereof, wherein

Z is selected from the group consisting of

phenyl;

naphthyl;

C<sub>3-7</sub> cycloalkyl;

heterocycle; and

heterobicyclic;

wherein Z is optionally substituted with one, or independently from each other, more of

halogen;

CN;

OH;

=O, where the ring is at least partially saturated;

C<sub>1-6</sub> alkyl, optionally substituted with one or more F; and

O-C<sub>1-6</sub> alkyl, optionally substituted with one or more F;

R<sup>1</sup>, R<sup>2</sup>, R<sup>4</sup>, R<sup>5</sup> are independently from each other selected from the group consisting of

H;

F;

OH;

C<sub>1-6</sub> alkyl, optionally substituted with one or more F; and

O-C<sub>1-6</sub> alkyl, optionally substituted with one or more F;

and/or R<sup>1</sup> and R<sup>2</sup> optionally form together C<sub>3-7</sub> cycloalkyl, which is optionally substituted with one or more F;

and/or R<sup>2</sup> and R<sup>3</sup> optionally form together C<sub>3-7</sub> cycloalkyl, which is optionally substituted with one or more F;

and/or R<sup>3</sup> and R<sup>4</sup> optionally form together C<sub>3-7</sub> cycloalkyl, which is optionally substituted with one or more F;

and/or R<sup>4</sup> and R<sup>5</sup> optionally form together C<sub>3-7</sub> cycloalkyl, which is optionally substituted with one or more F;

R<sup>3</sup> is H or C<sub>1-6</sub> alkyl;

X is selected from the group consisting of

H;

F; and

C<sub>1-6</sub> alkyl, optionally substituted with one or more F;

n is 0, 1 or 2;

A<sup>1</sup>, A<sup>2</sup> are independently from each other selected from the group consisting of

H;

halogen;

C<sub>1-6</sub> alkyl, optionally substituted with one or more F; and

R<sup>6</sup>; provided that one of A<sup>1</sup> and A<sup>2</sup> is R<sup>6</sup>;

R<sup>6</sup> is -C(R<sup>7</sup>R<sup>8</sup>)-Y-T;

R<sup>7</sup>, R<sup>8</sup> are independently from each other selected from the group consisting of

H;

F; and

C<sub>1-6</sub> alkyl, optionally substituted with one or more F;

and/or R<sup>7</sup> and R<sup>8</sup> optionally form together C<sub>3-7</sub> cycloalkyl, which is optionally substituted with one or more F;

Y is selected from the group consisting of

-O-;  
-C<sub>1-6</sub> alkyl-O-;  
-N(R<sup>9</sup>)-;  
-C<sub>1-6</sub> alkyl-N(R<sup>9</sup>)-  
-S-;  
-C<sub>1-6</sub> alkyl-S-;  
-S(O)-;  
-C<sub>1-6</sub> alkyl-S(O)-;  
-S(O)<sub>2</sub>-; and  
-C<sub>1-6</sub> alkyl-S(O)<sub>2</sub>-;

wherein each C<sub>1-6</sub> alkyl is optionally substituted with one or more F;

R<sup>9</sup>, T are independently from each other T<sup>1</sup>-T<sup>2</sup> or T<sup>2</sup>;

T<sup>1</sup> is selected from the group consisting of

-C<sub>1-6</sub> alkyl-;  
-C<sub>1-6</sub> alkyl-O-  
-C<sub>1-6</sub> alkyl-N(R<sup>10</sup>)-  
-C(O)-;  
-C(O)-C<sub>1-6</sub> alkyl-;  
-C(O)-C<sub>1-6</sub> alkyl-O-;  
-C(O)-C<sub>1-6</sub> alkyl-N(R<sup>10</sup>)-;  
-C(O)O-;  
-C(O)O-C<sub>1-6</sub> alkyl-;  
-C(O)O-C<sub>1-6</sub> alkyl-O-;  
-C(O)O-C<sub>1-6</sub> alkyl-N(R<sup>10</sup>)-;  
-C(O)N(R<sup>10</sup>)-;  
-C(O)N(R<sup>10</sup>)-C<sub>1-6</sub> alkyl-;  
-C(O)N(R<sup>10</sup>)-C<sub>1-6</sub> alkyl-O-;

$-\text{C}(\text{O})\text{N}(\text{R}^{10})-\text{C}_{1-6} \text{ alkyl}-\text{N}(\text{R}^{11})-$ ;

$-\text{S}(\text{O})_2-$ ;

$-\text{S}(\text{O})_2-\text{C}_{1-6} \text{ alkyl}-$ ;

$-\text{S}(\text{O})_2-\text{C}_{1-6} \text{ alkyl}-\text{O}-$ ; and

$-\text{S}(\text{O})_2-\text{C}_{1-6} \text{ alkyl}-\text{N}(\text{R}^{10})-$ ;

wherein each  $\text{C}_{1-6}$  alkyl is optionally substituted with one or more F;

$\text{R}^{10}$ ,  $\text{R}^{11}$  are independently from each other H or  $\text{C}_{1-6}$  alkyl, optionally substituted with one or more F;

$\text{T}^2$  is selected from the group consisting of

H;

$\text{CF}_3$ ;

phenyl;

naphthyl;

wherein phenyl and naphthyl are optionally substituted with one, or independently from each other, more of

halogen;

CN;

$\text{R}^{12}$ ;

$\text{COOH}$ ;

$\text{OH}$ ;

$\text{C}(\text{O})\text{NH}_2$ ;

$\text{S}(\text{O})_2\text{NH}_2$ ;

$\text{COOT}^3$ ;

$\text{OT}^3$ ;

$\text{C}(\text{O})\text{NHT}^3$ ;

$\text{S}(\text{O})_2\text{NHT}^3$ ; or

$\text{T}^3$ ;

$\text{C}_{3-7}$  cycloalkyl;

heterocycle; and

heterobicycle;

wherein C<sub>3-7</sub> cycloalkyl, heterocycle and heterobicyclic are optionally substituted with one, or independently from each other, more of

halogen;

CN;

R<sup>13</sup>;

OH;

=O, where the ring is at least partially saturated;

NH<sub>2</sub>

COOH;

C(O)NH<sub>2</sub>;

S(O)<sub>2</sub>NH<sub>2</sub>;

COOT<sup>3</sup>;

OT<sup>3</sup>;

C(O)NHT<sup>3</sup>;

S(O)<sub>2</sub>NHT<sup>3</sup>;

NHT<sup>3</sup>; or

T<sup>3</sup>;

whereby when R<sup>9</sup> is T<sup>1</sup>-T<sup>2</sup> and represents -C<sub>1-6</sub> alkyl and T is T<sup>1</sup>-T<sup>2</sup> and represents -C<sub>1-6</sub> alkyl then R<sup>9</sup> and T may form together a 3 to 7 membered cyclic group containing 1 N;

R<sup>12</sup> is selected from the group consisting of

C<sub>1-6</sub> alkyl;

O-C<sub>1-6</sub> alkyl;

COO-C<sub>1-6</sub> alkyl;

OC(O)- C<sub>1-6</sub> alkyl;

C(O)N(R<sup>15</sup>)- C<sub>1-6</sub> alkyl;

S(O)<sub>2</sub>N(R<sup>17</sup>)-C<sub>1-6</sub> alkyl;

S(O)-C<sub>1-6</sub> alkyl;

S(O)<sub>2</sub>-C<sub>1-6</sub> alkyl; and

N(R<sup>18</sup>)S(O)<sub>2</sub>-C<sub>1-6</sub> alkyl;

wherein each C<sub>1-6</sub> alkyl is optionally substituted with one, or independently from each other, more of F, COOR<sup>19</sup>, C(O)N(R<sup>20</sup>R<sup>21</sup>), S(O)<sub>2</sub>N(R<sup>22</sup>R<sup>23</sup>), OR<sup>24</sup>, N(R<sup>25</sup>R<sup>26</sup>), T<sup>3</sup>, O-T<sup>3</sup> or N(R<sup>27</sup>)-T<sup>3</sup>;

R<sup>13</sup> is selected from the group consisting of

C<sub>1-6</sub> alkyl;

O-C<sub>1-6</sub> alkyl;

N(R<sup>14</sup>)-C<sub>1-6</sub> alkyl;

COO-C<sub>1-6</sub> alkyl;

OC(O)-C<sub>1-6</sub> alkyl;

C(O)N(R<sup>15</sup>)-C<sub>1-6</sub> alkyl;

N(R<sup>16</sup>)-C(O)-C<sub>1-6</sub> alkyl;

S(O)<sub>2</sub>N(R<sup>17</sup>)-C<sub>1-6</sub> alkyl;

S(O)-C<sub>1-6</sub> alkyl;

S(O)<sub>2</sub>-C<sub>1-6</sub> alkyl; and

-N(R<sup>18</sup>)S(O)<sub>2</sub>-C<sub>1-6</sub> alkyl;

wherein each C<sub>1-6</sub> alkyl is optionally substituted with one, or independently from each other, more of F, COOR<sup>19</sup>, C(O)N(R<sup>20</sup>R<sup>21</sup>), S(O)<sub>2</sub>N(R<sup>22</sup>R<sup>23</sup>), OR<sup>24</sup>, N(R<sup>25</sup>R<sup>26</sup>), T<sup>3</sup>, O-T<sup>3</sup> or N(R<sup>27</sup>)-T<sup>3</sup>;

R<sup>14</sup>, R<sup>15</sup>, R<sup>16</sup>, R<sup>17</sup>, R<sup>18</sup>, R<sup>19</sup>, R<sup>20</sup>, R<sup>21</sup>, R<sup>22</sup>, R<sup>23</sup>, R<sup>24</sup>, R<sup>25</sup>, R<sup>26</sup>, R<sup>27</sup> are independently from each other H or C<sub>1-6</sub> alkyl;

T<sup>3</sup> is selected from the group consisting of

phenyl;

naphthyl;

wherein phenyl and naphthyl are optionally substituted with one, or independently from each other, more of

halogen;

CN;

COOH;

OH;

C(O)NH<sub>2</sub>;

$\text{S(O)}_2\text{NH}_2$ ;  
 $\text{C}_{1-6}$  alkyl;  
 $\text{O-C}_{1-6}$  alkyl;  
 $\text{COO-C}_{1-6}$  alkyl;  
 $\text{OC(O)-C}_{1-6}$  alkyl;  
 $\text{C(O)N(R}^{28})\text{-C}_{1-6}$  alkyl;  
 $\text{S(O)}_2\text{N(R}^{29})\text{-C}_{1-6}$  alkyl;  
 $\text{S(O)}_2\text{-C}_{1-6}$  alkyl; or  
 $\text{N(R}^{30})\text{S(O)}_2\text{-C}_{1-6}$  alkyl;

heterocycle;

heterobicycle; and

$\text{C}_{3-7}$  cycloalkyl;

wherein  $\text{C}_{3-7}$  cycloalkyl, heterocycle and heterobicycle are optionally substituted with one, or independently from each other, more of

halogen;

CN;

OH;

=O, where the ring is at least partially saturated;

$\text{NH}_2$

$\text{COOH}$ ;

$\text{C(O)NH}_2$ ;

$\text{S(O)}_2\text{NH}_2$ ;

$\text{C}_{1-6}$  alkyl;

$\text{O-C}_{1-6}$  alkyl;

$\text{N(R}^{31})\text{-C}_{1-6}$  alkyl;

$\text{COO-C}_{1-6}$  alkyl;

$\text{OC(O)-C}_{1-6}$  alkyl;

$\text{C(O)N(R}^{32})\text{-C}_{1-6}$  alkyl;

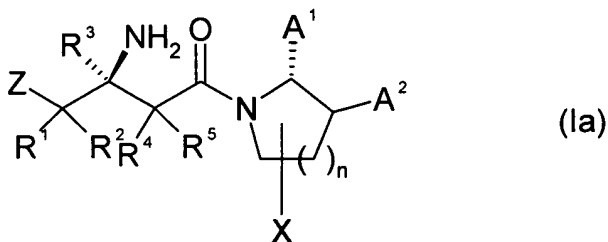
$\text{N(R}^{33})\text{-C(O)-C}_{1-6}$  alkyl;

$\text{S(O)}_2\text{N(R}^{34})\text{-C}_{1-6}$  alkyl;

$\text{S(O)}_2\text{-C}_{1-6}$  alkyl; or

$\text{-N(R}^{35})\text{S(O)}_2\text{-C}_{1-6}$  alkyl.

2. (Original) A compound according to claim 1 of formula (Ia)

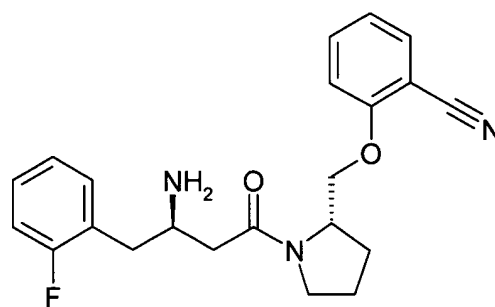
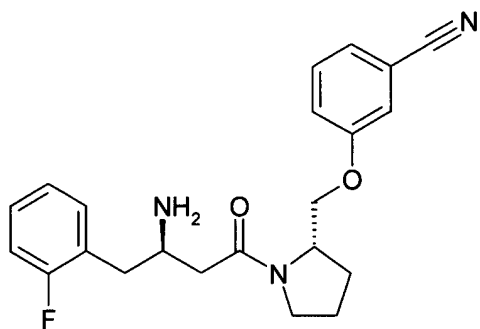
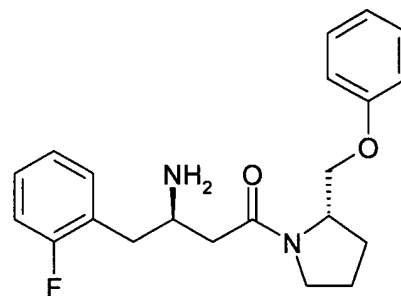
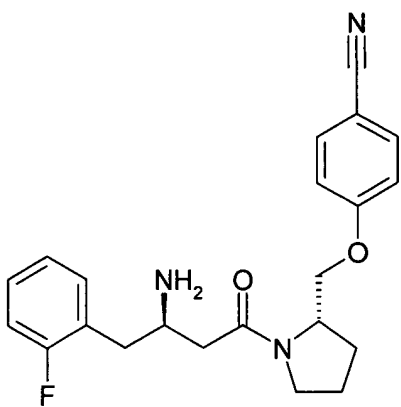
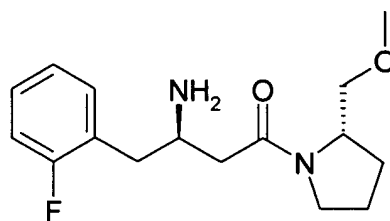
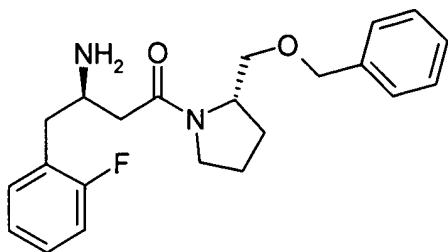


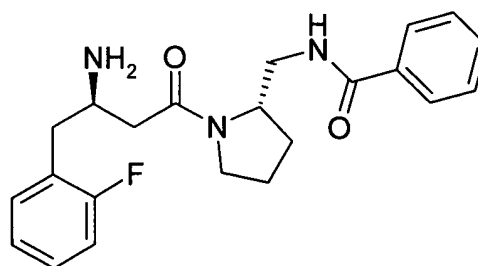
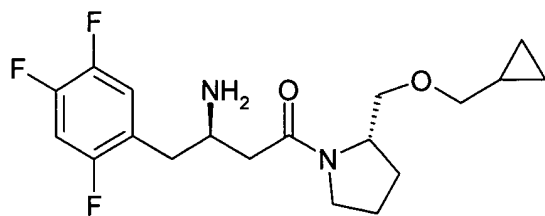
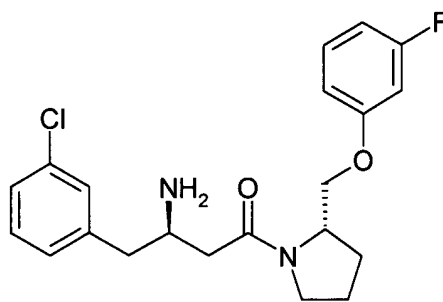
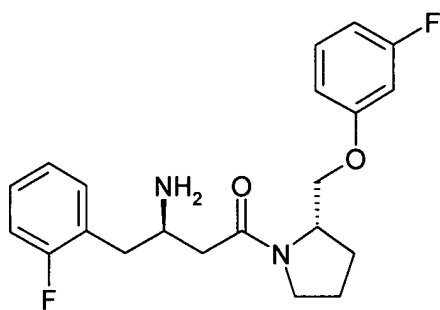
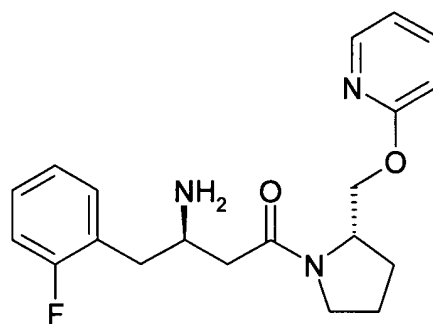
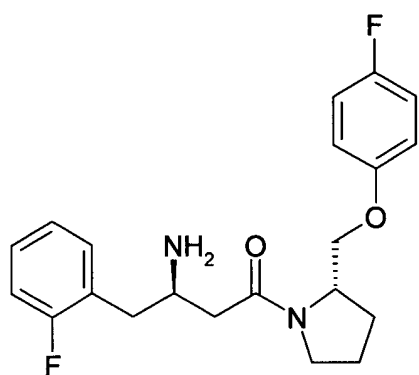
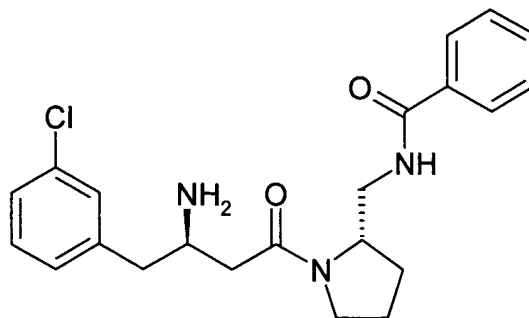
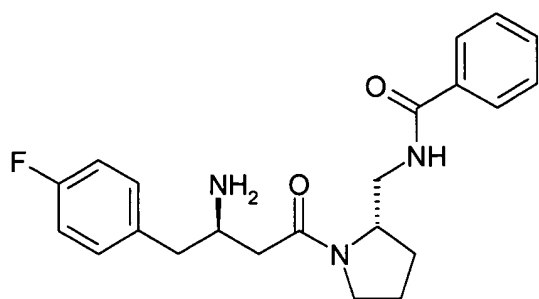
or a pharmaceutically acceptable salt thereof, wherein Z, R<sup>1</sup>-R<sup>5</sup>, A<sup>1</sup>, A<sup>2</sup>, n and X have the meaning as indicated in claim 1.

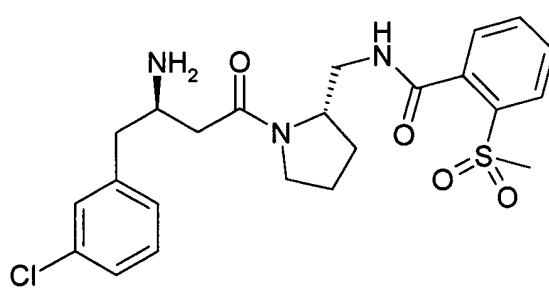
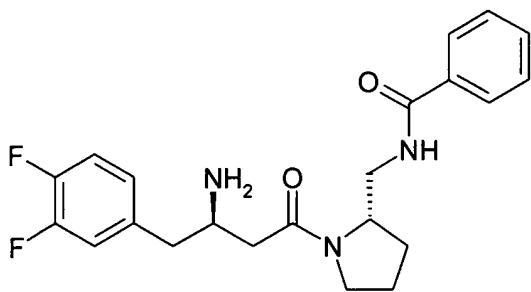
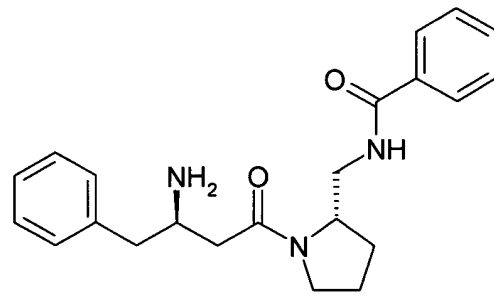
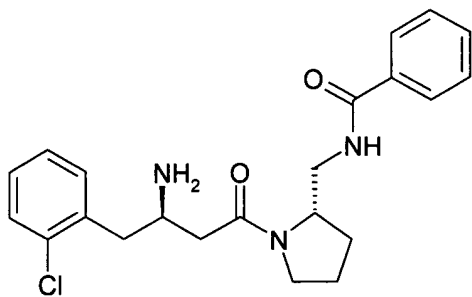
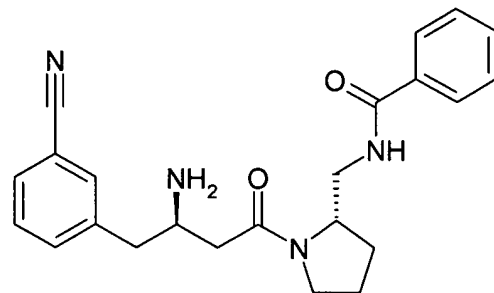
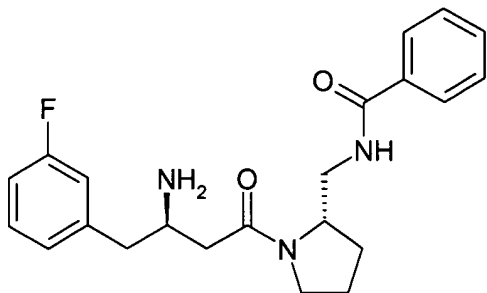
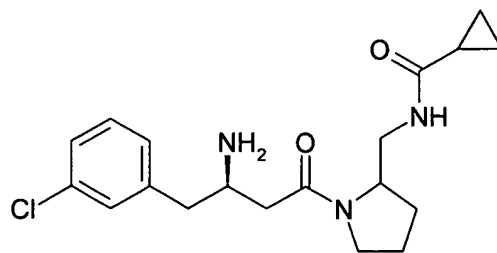
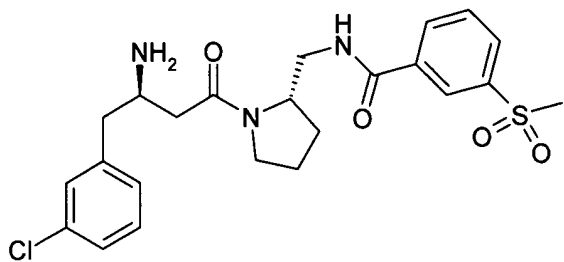
3. (Currently amended) A compound according to claim 1 or 2, wherein Z is phenyl or heterocycle and Z is optionally substituted independently from each other with up to 2 of Cl, F, CN, CH<sub>3</sub> or OCH<sub>3</sub>.
4. (Currently amended) A compound according to ~~any one of the preceding claims~~ claim 1, wherein R<sup>1</sup>, R<sup>2</sup>, R<sup>4</sup>, R<sup>5</sup> are independently from each other selected from the group consisting of H, F, OH, CH<sub>3</sub>, OCH<sub>3</sub>.
5. (Currently amended) A compound according to ~~any one of the preceding claims~~ claim 1, wherein R<sup>3</sup> is H.
6. (Currently amended) A compound according to ~~any one of the preceding claims~~ claim 1, wherein X is H, F or CH<sub>3</sub>.
7. (Currently amended) A compound according to ~~any one of the preceding claims~~ claim 1, wherein n is 1.
8. (Currently amended) A compound according to ~~any one of the preceding claims~~ claim 1, wherein A<sup>1</sup> is R<sup>6</sup> and A<sup>2</sup> is H, F or CH<sub>3</sub>.
9. (Currently amended) A compound according to ~~any one of the preceding claims~~ claim 1, wherein R<sup>6</sup> is -CH<sub>2</sub>-Y-T.

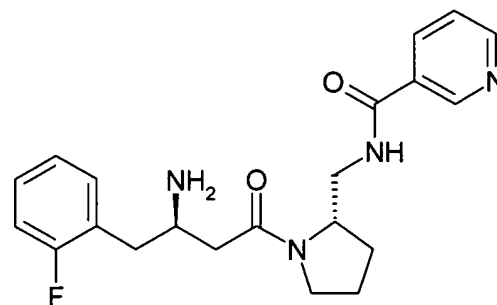
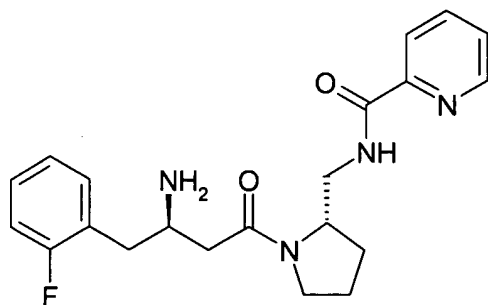
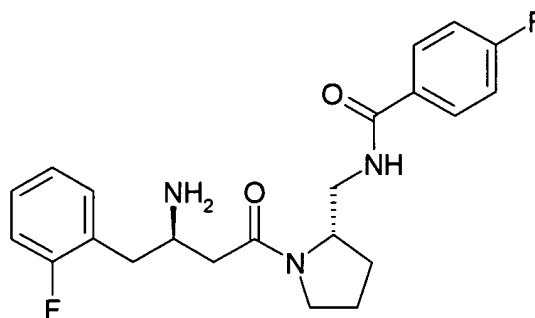
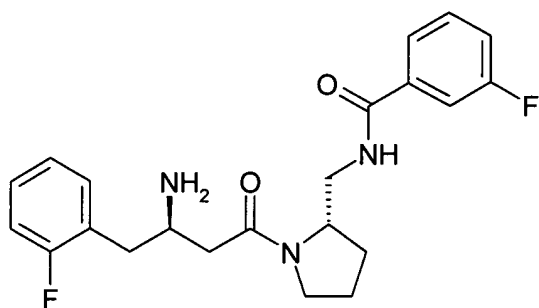
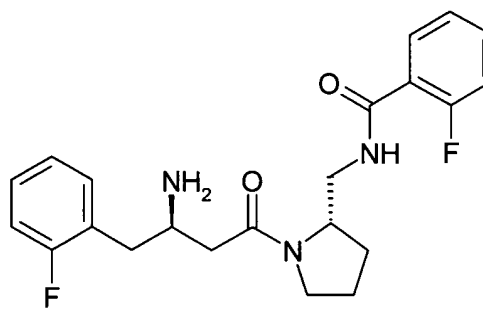
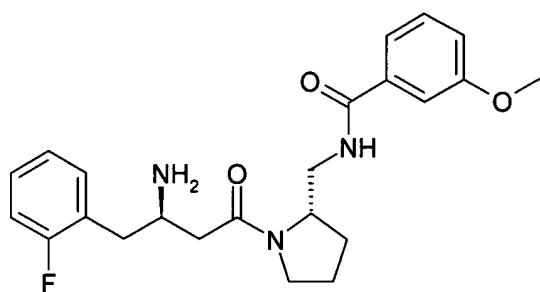
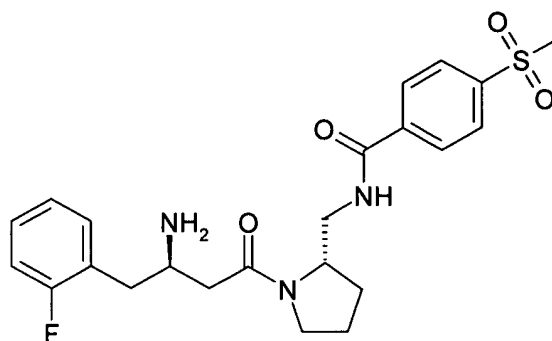
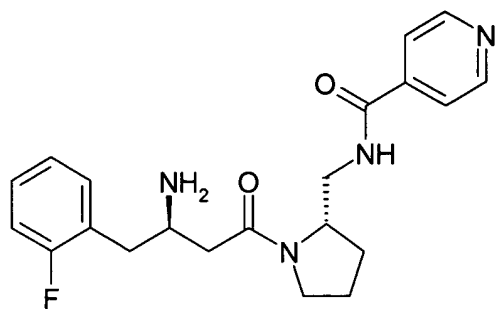


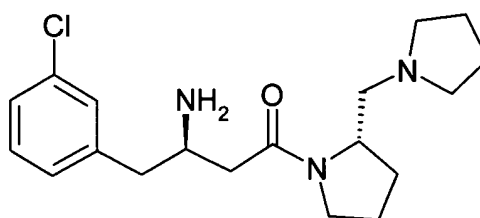
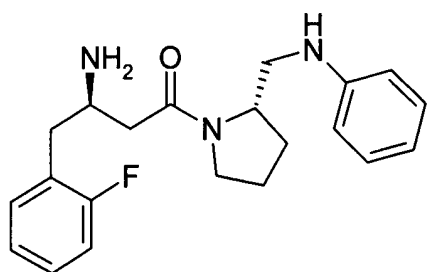
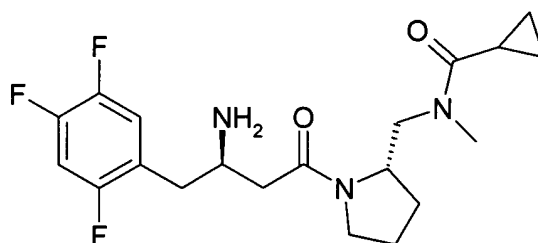
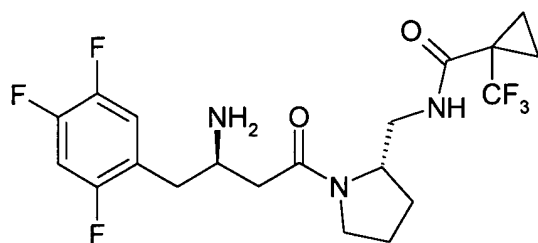
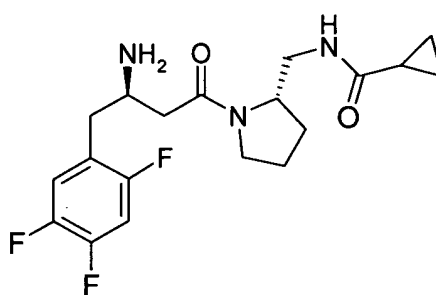
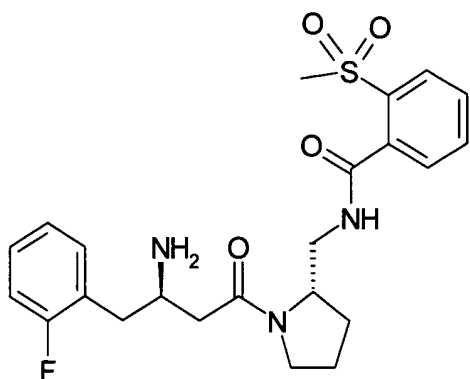
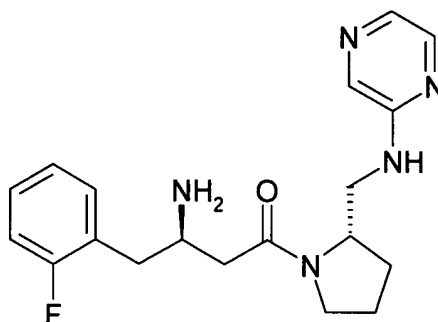
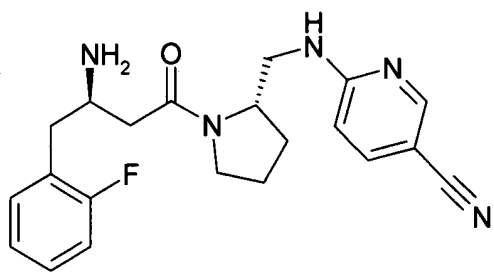
10. (Currently amended) A compound according to ~~any one of the preceding claims~~ claim 1, wherein Y is -O-, -N(R<sup>9</sup>)- or -S(O)<sub>2</sub>-.
11. (Currently amended) A compound according to ~~any one of the preceding claims~~ claim 1, wherein R<sup>9</sup> is selected from the group consisting of H, CH<sub>3</sub>, COOH, COOCH<sub>3</sub>, C(O)NH<sub>2</sub>, C(O)N(CH<sub>3</sub>)<sub>2</sub>, and S(O)<sub>2</sub>CH<sub>3</sub>.
12. (Currently amended) A compound according to ~~any one of the preceding claims~~ claim 1, wherein T is T<sup>1</sup>-T<sup>2</sup> or T<sup>2</sup> and wherein T<sup>1</sup> is selected from the group consisting of
- CH<sub>2</sub>-;
  - C(O)-;
  - C(O)-CH<sub>2</sub>-;
  - C(O)O-;
  - C(O)O-CH<sub>2</sub>-;
  - C(O)NH-;
  - C(O)NH-CH<sub>2</sub>-;
  - S(O)<sub>2</sub>-; and
  - S(O)<sub>2</sub>-CH<sub>2</sub>-.
13. (Original) A compound according to claim 12, wherein T is T<sup>1</sup>-T<sup>2</sup> or T<sup>2</sup> and wherein T<sup>1</sup> is selected from the group consisting of -C(O)-; -CH<sub>2</sub>-; -S(O)<sub>2</sub>-; and -C(O)NH-.
14. (Currently amended) A compound according to ~~any one of the preceding claims~~ claim 1, wherein R<sup>6</sup> is -CH<sub>2</sub>-N(R<sup>36</sup>)-T, and wherein R<sup>36</sup> is H or S(O)<sub>2</sub>CH<sub>3</sub>.
15. (Currently amended) A compound according to ~~any one of the preceding claims~~ claim 1, wherein T<sup>2</sup> is phenyl or heterocycle.
16. (Original) A compound according to claim 1 selected from the group consisting of

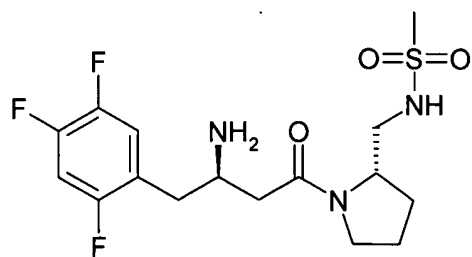
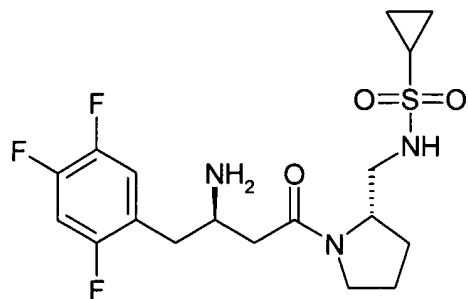
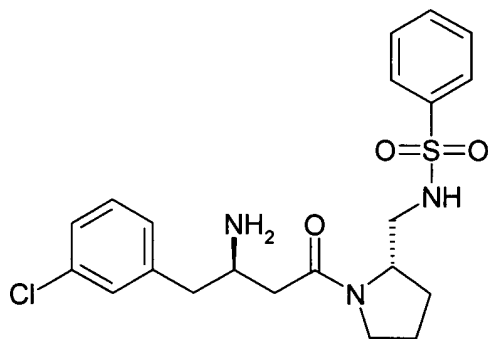
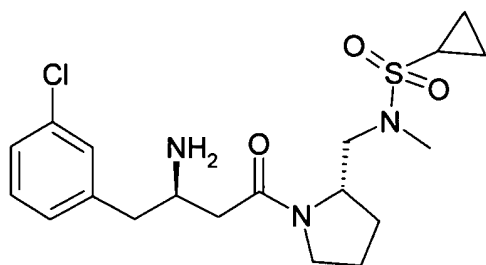
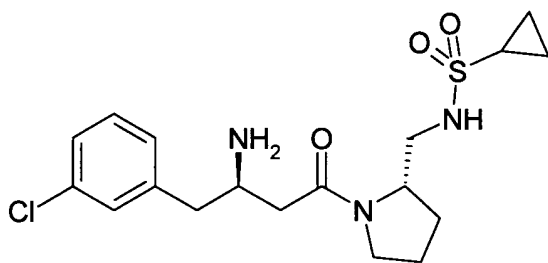
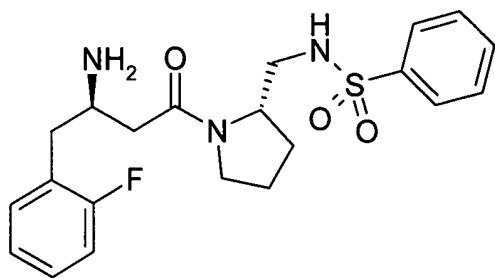
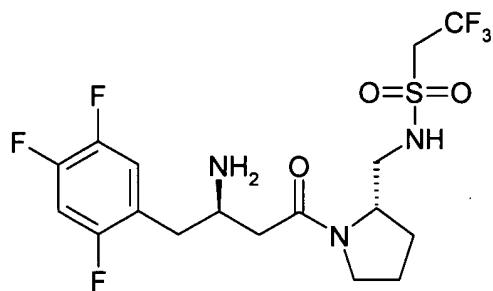
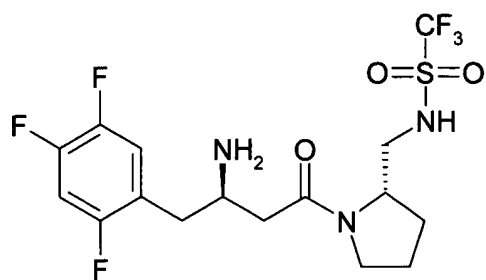


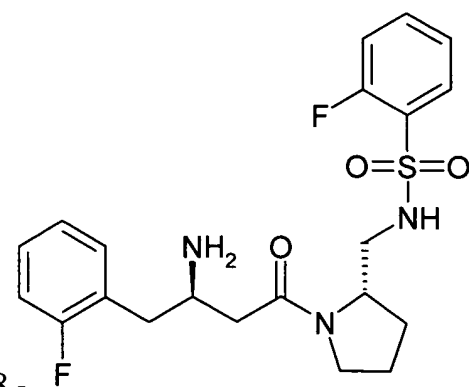
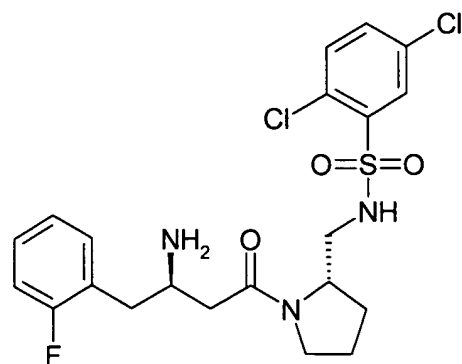
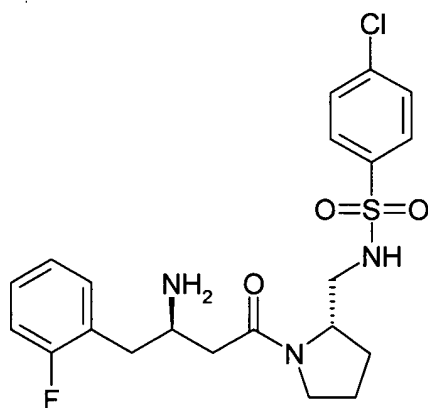
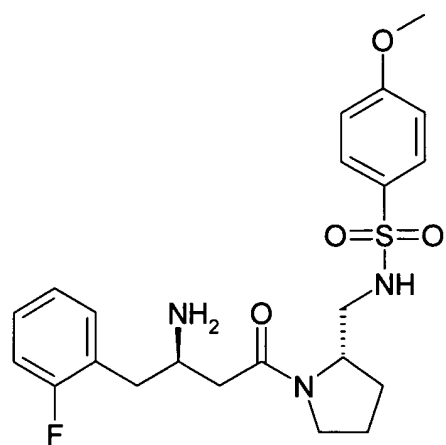
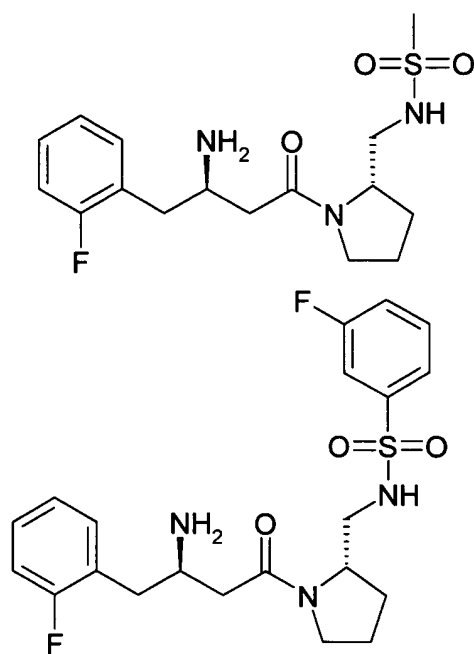
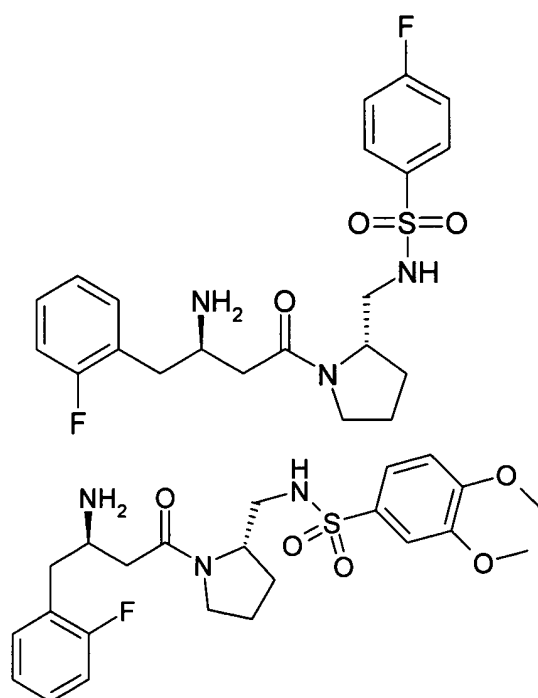




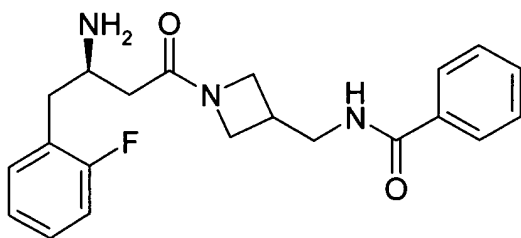
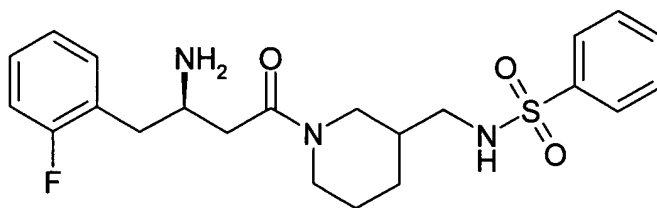
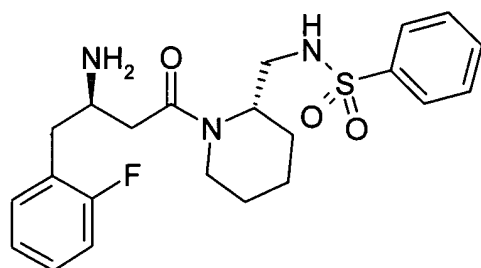
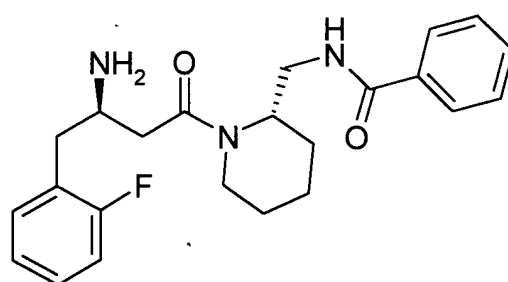
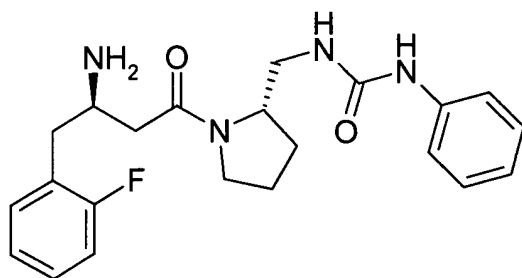
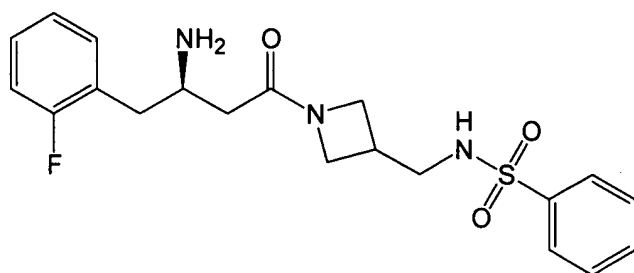


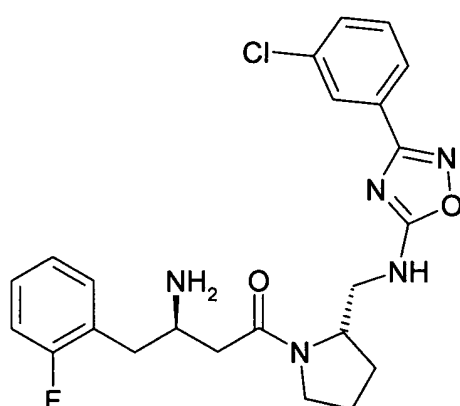
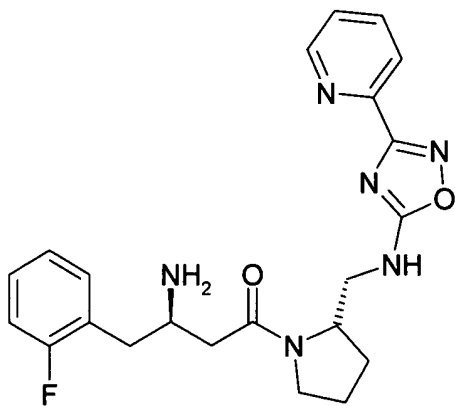
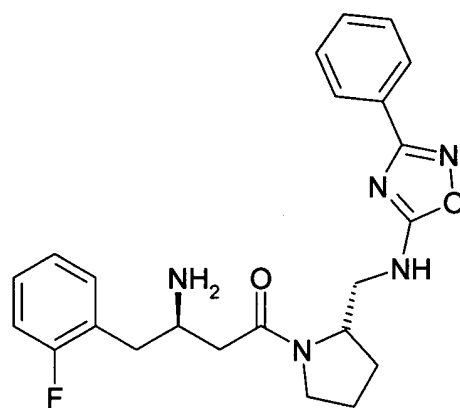
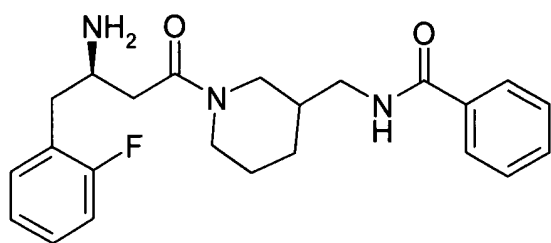
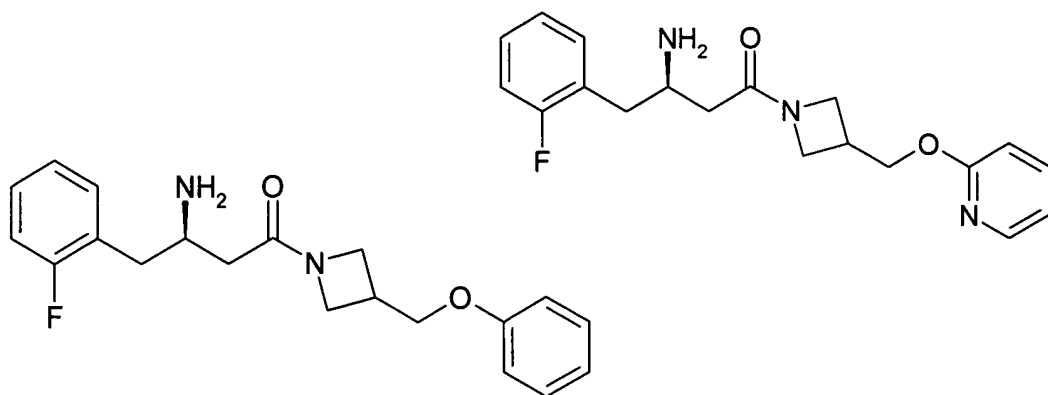


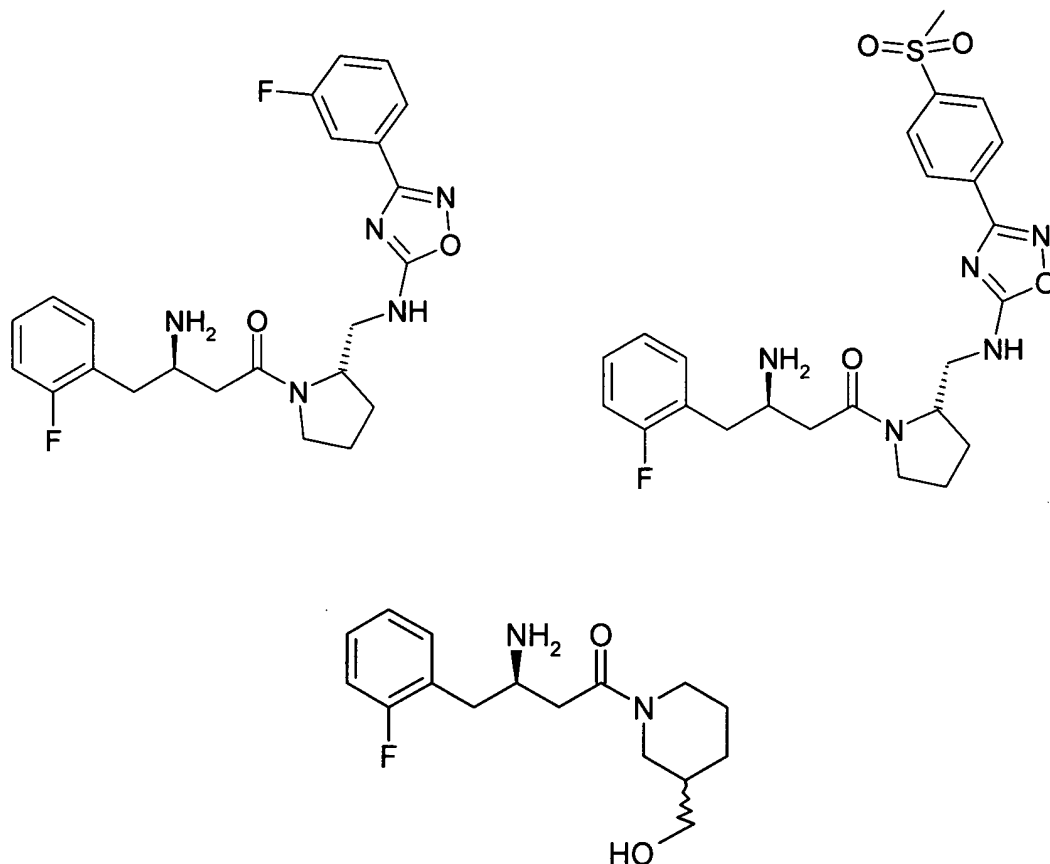












or a pharmaceutically acceptable salt thereof.

17. (Currently amended) A prodrug compound of a compound according to ~~any one of the claims 1 to 16~~ claim 1.
18. (Currently amended) A pharmaceutical composition comprising a compound or a pharmaceutically acceptable salt thereof according to ~~any one of the claims 1 to 17~~ claim 1 together with a pharmaceutically acceptable carrier.
19. (Currently amended) A pharmaceutical composition according to claim 18, comprising one or more additional compounds or pharmaceutically acceptable salts thereof selected from

the group consisting of another of said compound of formula (I) ~~according to any one of the claims 1 to 17~~; another DPP-IV inhibitor; insulin sensitizers; PPAR agonists; biguanides; protein tyrosinephosphatase-1B (PTP-1B) inhibitors; insulin and insulin mimetics; sulfonylureas and other insulin secretagogues;  $\alpha$ -glucosidase inhibitors; glucagon receptor antagonists; GLP-1, GLP-1 mimetics, and GLP-1 receptor agonists; GIP, GIP mimetics, and GIP receptor agonists; PACAP, PACAP mimetics, and PACAP receptor 3 agonists; cholesterol lowering agents; HMG-CoA reductase inhibitors; sequestrants; nicotiny alcohol; nicotinic acid or a salt thereof; PPAR $\alpha$  agonists; PPAR $\alpha$ / $\gamma$  dual agonists; inhibitors of cholesterol absorption; acyl CoA : cholesterol acyltransferase inhibitors; anti-oxidants; PPAR $\gamma$  agonists; antiobesity compounds; an ileal bile acid transporter inhibitor; and anti-inflammatory agents.

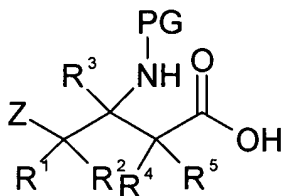
20. (Currently amended) A compound or a pharmaceutically acceptable salt thereof of ~~any one of the claims 1 to 17~~ claim 1 for use as a medicament.

21. (Currently amended) Use of a compound or a pharmaceutically acceptable salt thereof of ~~any of the claims 1 to 17~~ claim 1 for the manufacture of a medicament for the treatment or prophylaxis of non-insulin dependent (Type II) diabetes mellitus; hyperglycemia; obesity; insulin resistance; lipid disorders; dyslipidemia; hyperlipidemia; hypertriglyceridemia; hypercholesterolemia; low HDL; high LDL; atherosclerosis; growth hormone deficiency; diseases related to the immune response; HIV infection; neutropenia; neuronal disorders; anxiety; depression; tumor metastasis; benign prostatic hypertrophy; gingivitis; hypertension; osteoporosis; diseases related to sperm motility; low glucose tolerance; insulin resistance; its sequelae; vascular restenosis; irritable bowel syndrome; inflammatory bowel disease; including Crohn's disease and ulcerative colitis; other inflammatory conditions; pancreatitis; abdominal obesity; neurodegenerative disease; retinopathy; nephropathy; neuropathy; Syndrome X; ovarian hyperandrogenism (polycystic ovarian syndrome; Type II diabetes; or growth hormone deficiency.

22. (Currently amended) Use of a compound according to ~~any one of the claims 1 to 17~~ claim 1 as DPP-IV inhibitor.

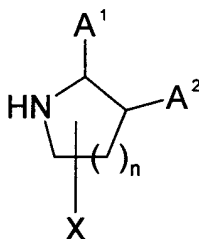
23. (Currently amended) Process for the preparation of a compound according to ~~any one of the claims 1 to 17~~ claim 1, comprising the steps of

- coupling of an amino-protected beta-amino acid of formula (IVa)



(IVa)

wherein PG is a protective group, with an amine of formula (III)



(III)

using standard peptide coupling conditions, reagents and protective groups;

- removing the protective group (PG).

24. (Original) A process according to claim 23, wherein the coupling reagents are 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide hydrochloride (EDC) in combination with 1-hydroxybenzotriazole (HOBt) and a base (triethylamine or diisopropylethylamine) or O-(7-azabenzotriazol-1-yl)-*N,N,N',N'*-tetramethyluronium hexafluorophosphate (HATU) in the presence of a base and the protective group is 9-fluorenylmethoxycarbonyl or *tert*-butoxycarbonyl.

25. (Currently amended) A process according to claim 23 ~~or~~ 24, wherein the protective group is removed using diethylamine in dichloromethane in the case of 9-fluorenylmethoxycarbonyl or using acidic conditions in the case of *tert*-butoxycarbonyl.